STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

March 15, 2017

Mr. Joseph Shane Geren
Environmental Engineer
e-copy: josephshane.geren@wacker.com
Wacker Polysilicon North America, LLC
553 Wacker Blvd
Charleston, TN 37310

Subject: **NPDES Permit No. TN0081311**
Wacker Polysilicon North America, LLC
Charleston, Bradley County, Tennessee

Dear Mr. Geren:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Resources hereby issues the enclosed NPDES Permit. The continuance and/or reissuance of this NPDES Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application. Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment. Any petition for permit appeal under this subsection (i) shall be filed with the Technical Secretary of the Water Quality, Oil and Gas Board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit. A copy of the filing should also be sent to TDEC's Office of General Counsel.

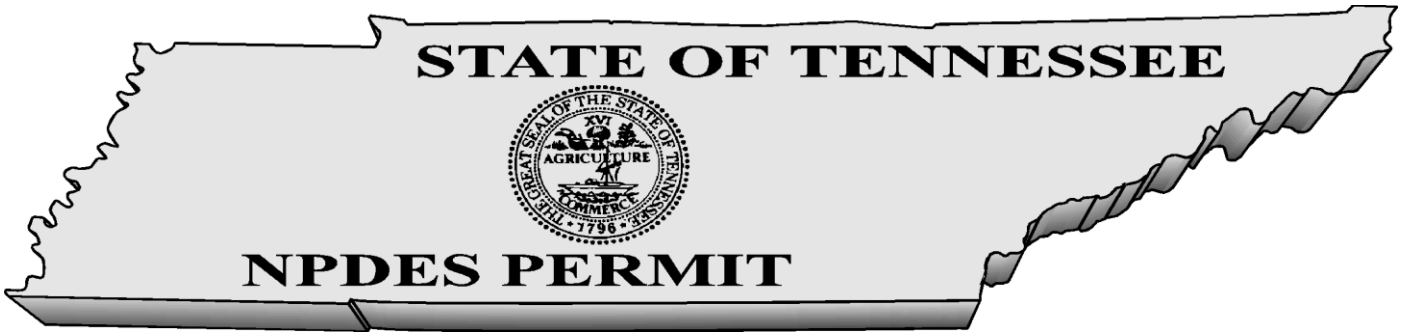
If you have questions, please contact the Chattanooga Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mr. Paul Higgins at (615) 532-1178 or by E-mail at *Paul.Higgins@tn.gov*.

Sincerely,

Vojin Janjić
Manager, Water-Based Systems

Enclosure

cc: Permit File
Chattanooga Environmental Field Office
Mr. Jeremy Copeland, Environmental Manager, jeremy.copeland@wacker.com



No. TN0081311

Authorization to discharge under the
National Pollutant Discharge Elimination System (NPDES)

Issued By

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Discharger:	**Wacker Polysilicon North America, LLC**
is authorized to discharge:	**process wastewater, non-contact cooling water and utility water from Outfall 001, return water from river water intake from Outfall 002, industrial stormwater, construction stormwater, utility water, and hydrostatic testing water from Outfall SW1, construction stormwater, and utility water from Outfall SW2, construction stormwater, utility water and hydrostatic test water from Outfall SW2A, construction stormwater, hydrostatic test water and utility water from Outfall SW3, and industrial and construction stormwater runoff, utility water, and hydrostatic testing water from SW4; and to operate a cooling water intake structure;**
from a facility located at:	**553 Wacker Blvd, Charleston, Bradley County, Tennessee**
to receiving waters named:	**Hiwassee River Embayment of Chickamauga Reservoir at mile 15.9 (Outfall 001), Hiwassee River Embayment of Chickamauga Reservoir at mile 16.5 (Outfall 002), Hiwassee River Embayment of Chickamauga Reservoir (South Mouse Creek) at mile 1.7 (Outfall SW1) and Hiwassee River Embayment of Chickamauga Reservoir (South Mouse Creek) at mile 1.4 (Outfall SW4), South Mouse Creek at mile 2.0 Outfall SW2, South Mouse Creek at mile 2.5 Outfall SW2A, and South Mouse Creek at mile 2.75 (Outfall SW3);**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on:	**April 1, 2017**
This permit shall expire on:	**March 31, 2022**
Issuance date:	**March 31, 2017**

for Tisha Calabrese Benton
Director

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PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Wacker Polysilicon North America, LLC is authorized to discharge process wastewater, non-contact cooling water and utility water from Outfall 001; return water from river water intake from Outfall 002; industrial and construction stormwater, utility water, and hydrostatic testing water from Outfall SW1; construction stormwater and utility water from Outfall SW2; construction stormwater, hydrostatic test water and utility water from Outfall SW2A; construction stormwater and hydrostatic test water from Outfall SW3; and industrial and construction stormwater, utility water, and hydrostatic testing water from SW4.

These outfalls are located as follows: Outfall 001 at the Hiwassee River Embayment of Chickamauga Reservoir at mile 15.9, Outfall 002 at the Hiwassee River Embayment of Chickamauga Reservoir at mile 16.5, Outfall SW1 at the Hiwassee River Embayment of Chickamauga Reservoir (South Mouse Creek) at mile 1.7, Outfall SW4 at the Hiwassee River Embayment of Chickamauga Reservoir (South Mouse Creek) at mile 1.4, Outfall SW2 at South Mouse Creek at mile 2.0 and SW2A at mile 2.5, and Outfall SW3 at South Mouse Creek at mile 2.75.

These discharges shall be limited and monitored by the permittee as specified below:

TIER 1
Description : External Outfall, Number : 001
Monitoring: Effluent Gross
Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
LC50 Static 48Hr Acute Ceriodaphnia	>=	1.22	% mortality	Grab	Annual	Minimum
LC50 Static 48Hr Acute Pimephales	>=	1.22	% mortality	Grab	Annual	Minimum
Total Dissolved Solids (TDS)	<=	185,468	lb/d	Composite	Daily	Daily Maximum
Total Suspended Solids (TSS)	Report	-	mg/L	Composite	Daily	Daily Maximum
pH	>=	6	SU	Grab	Daily	Daily Minimum
pH	<=	9	SU	Grab	Daily	Daily Maximum

TIER 2
Description: External Outfall, Number: 001
Monitoring: Effluent Gross
Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
LC50 Static 48Hr Acute Ceriodaphnia	>=	3	% mortality	Grab	Annual	Minimum
LC50 Static 48Hr Acute Pimephales	>=	3	% mortality	Grab	Annual	Minimum
Total Dissolved Solids (TDS)	<=	462,370	lb/d	Composite	Daily	Daily Maximum
Total Suspended Solids (TSS)	Report	-	mg/L	Composite	Daily	Daily Maximum
pH	>=	6	SU	Grab	Daily	Daily Minimum
pH	<=	9	SU	Grab	Daily	Daily Maximum

TIER 3
Description: External Outfall, Number: 001
Monitoring: Effluent Gross
Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
LC50 Static 48Hr Acute Ceriodaphnia	>=	4.8	% mortality	Grab	Annual	Minimum
LC50 Static 48Hr Acute Pimephales	>=	4.8	% mortality	Grab	Annual	Minimum
Total Dissolved Solids (TDS)	<=	740,258	lb/d	Composite	Daily	Daily Maximum
Total Suspended Solids (TSS)	Report	-	mg/L	Composite	Daily	Daily Maximum
pH	>=	6	SU	Grab	Daily	Daily Minimum
pH	<=	9	SU	Grab	Daily	Daily Maximum

The permittee is authorized to discharge river water intake return water through Outfall 002 without limitations or monitoring requirements. The discharge shall not have any visible oil sheen and reasonable steps shall be taken to prevent the return of unsightly materials to the receiving waters. This discharge must result in no other materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

Description: External Outfall
Numbers: SW1, and SW4
Monitoring: Effluent Gross
Season: All Year

Parameter	Qualifier	Value*	Unit	Sample Type	Frequency	Statistical Base
Aluminum, total (as Al)	<=	0.75	mg/L	Grab	Annual	Daily Maximum
Copper, total (as Cu)	<=	0.018	mg/L	Grab	Annual	Daily Maximum
Flow	Report	-	Mgal/d	Estimate	Annual	Daily Maximum
Iron, total (as Fe)	<=	5	mg/L	Grab	Annual	Daily Maximum
Magnesium, total (as Mg)	<=	0.064	mg/L	Grab	Annual	Daily Maximum
Nitrite plus nitrate total (as N)	<=	0.68	mg/L	Grab	Annual	Daily Maximum
Nitrogen, Ammonia total (as N)	<=	4	mg/L	Grab	Annual	Daily Maximum

* Benchmarks for Industrial Inorganic Chemicals Monitoring Requirements. The permittee shall evaluate the results obtained from sampling and monitoring pursuant to the table above. The evaluation should be done following the required annual sampling events to determine whether the facility is below, meets, or exceeds the monitoring benchmarks. If the results of annual stormwater runoff monitoring demonstrate that the facility has exceeded the benchmark(s), the permittee must inform the Chattanooga Environmental Field Office (EFO) in writing; within 30 days from the time stormwater monitoring results were received, describing the likely cause of the exceedance(s). Furthermore, within 60 days from the time stormwater monitoring results were received, the facility must:

- Review its SWPPP, make any modifications or additions to the SWPPP which would assist in reducing specific effluent concentrations which are equal to or less than the monitoring benchmarks for that facility, and
- Submit to the EFO a brief summary of the proposed SWPPP modifications (including a timetable for implementation).

Outfalls SW1, SW2A, SW3 amd SW4 are also subject to the following requirements applicable to hydrostatic test water discharges:

Internal Monitoring Point: IMP1 (to SW1), IMP2A (to SW2A), IMP3 (to SW3) and IMP4 (to SW4)
Monitoring: All Weather
Season: All Year

Code	Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
00400	pH	>=	6	SU	Grab	Once Per Discharge	Daily Minimum
00400	pH	<=	9	SU	Grab	Once Per Discharge	Daily Maximum
50050	Flow	Report	-	Mgal/d	Estimate	Once Per Discharge	Total
84066	Oil and grease visual	Report	-	Y=1;N=0	Visual	Once Per Discharge	Value

a) Cleaning water; and pipe, equipment or vessel residuals may not be discharged as hydrostatic discharges; but must be treated if similar to facility wastewaters or disposed of according to all appropriate state and federal regulations;
b) The construction, transportation and storage of the vessels to be tested shall be done in such a way that prevents debris and materials from being deposited within the vessel where it may later be washed out by hydrostatic test water and released to surface or subsurface water;
c) The discharger shall use proper engineering practices and Best Management Practices (BMPs) to prevent contamination of hydrostatic test water by fuels, lubricants or waste materials. Used vessels or piping must be cleaned prior to testing.
d) Each hydrostatic discharge must be sampled at the point of discharge from the pipe, vessel or equipment being tested according to the Internal Monitoring Point table immediately above and reported on a Discharge Monitoring Report (DMR) form due on the date of the next process DMR form.

Outfalls SW1, SW2, SW2A, SW3 and SW4 are subject to the following requirements:

(a) *Erosion and sediment controls.* Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

(1) Control stormwater volume and velocity to minimize soil erosion in order to minimize pollutant discharges;
(2) Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points;
(3) Minimize the amount of soil exposed during construction activity;
(4) Minimize the disturbance of steep slopes;
(5) *Minimize sediment discharges from the site.* The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
(6) Provide and maintain natural buffers around waters of the United States, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible;
(7) Minimize soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted; and
(8) Unless infeasible, preserve topsoil. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.

(b) *Soil stabilization.* Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed as specified by the permitting authority. Stabilization must be completed within a period of time determined by the permitting authority.

In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed.

(c) *Dewatering.* Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.

(d) *Pollution prevention measures.* Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

(1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
(2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use); and
(3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

(e) *Prohibited discharges.* The following discharges are prohibited:

(1) Wastewater from washout of concrete, unless managed by an appropriate control;
(2) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
(3) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
(4) Soaps or solvents used in vehicle and equipment washing.

(f) *Surface outlets.* When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible.

Outfalls SW1, SW2, SW2A and SW4 are authorized to discharge utility water in the amount of approximately 500 gallons per month with only the general monitoring requirements and conditions required of all outfalls as listed below.

Additional monitoring requirements and conditions applicable to **all outfalls** include:

There shall be no distinctly visible floating solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character that may be detrimental to fish and aquatic life.

The wastewater discharge shall not contain pollutants in quantities that will be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

Sludge or any other material removed by any treatment works must be disposed of in a manner, which prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. and the Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

Unless elsewhere specified, summer months are May through October; winter months are November through April.

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act." (40 C.F.R. 125.98(b)(1))

Cooling Water Intake Section 316(b) Requirements

TDEC has determined that the cooling water intake structure used by the Wacker Polysilicon North America, LLC was designed to meet the best technology available (BTA) to minimize adverse environmental impact in accordance with Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326). The permittee was notified of this determination by letter from Mr. Vojin Janjic on March 8, 2013. The design data and any new pertinent information must be submitted with the application for renewal of this permit.

B. MONITORING PROCEDURES

1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified herein shall be representative of the volume and nature of the monitored discharge, and shall be taken after treatment and prior to mixing with uncontaminated storm water runoff or the receiving stream.

2. Sampling Frequency

The permittee should mark the 'No Discharge' box on the Discharge Monitoring Report form only if a permitted outfall does not discharge at any time during the monitoring period. If the outfall discharges effluent at any time during the monitoring period, the permittee must provide at least one sampling result from the effluent of that outfall.

3. Test Procedures

a. Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act (the "Act"), as amended, under which such procedures may be required.

b. Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR Part 136, as amended, promulgated pursuant to Section 304 (h) of the Act.

In instances where permit limits established through implementation of applicable water criteria are below analytical capabilities, compliance with those limits will be determined using the detection limits described in the TN Rules, Chapter 0400-40-03-.05(8).

4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

a. The exact place, date and time of sampling;

b. The exact person(s) collecting samples;

c. The dates and times the analyses were performed;

d. The person(s) or laboratory who performed the analyses;

e. The analytical techniques or methods used, and;

f. The results of all required analyses.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation shall be retained for a minimum of three (3) years, or longer, if requested by the Division of Water Resources.

C. DEFINITIONS

For the purpose of this permit, ***Annually*** is defined as a monitoring frequency of once every twelve (12) months beginning with the date of issuance of this permit so long as the following set of measurements for a given 12 month period are made approximately 12 months subsequent to that time.

A ***bypass*** is defined as the intentional diversion of waste streams from any portion of a treatment facility.

A ***calendar day*** is defined as the 24-hour period from midnight to midnight or any other 24-hour period that reasonably approximates the midnight to midnight time period.

A **Composite Sample**, for the purposes of this permit, is a sample collected continuously over a period of 24-hours at a rate proportional to the flow. Composite sample should be a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

Cooling water means water used for contact or non-contact cooling, including water used for equipment cooling, evaporative cooling tower makeup, and dilution of effluent heat content. The intended use of the cooling water is to absorb waste heat rejected from the process or processes used, or from auxiliary operations on the facility's premises.

Cooling water intake structure means the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the United States. The cooling water intake structure extends from the point at which water is first withdrawn from waters of the United States up to, and including the intake pumps***.***

Actual Intake Flow (AIF) means the average volume of water withdrawn on an annual basis by the cooling water intake structures over the past three years.

Design intake flow (DIF) means the value assigned during the cooling water intake structure design to the maximum instantaneous rate of flow of water the cooling water intake system is capable of withdrawing from a source waterbody.

Entrainment- means the incorporation of all life stages of fish and shellfish with intake water flow entering and passing through a cooling water intake structure and into a cooling water system.

Impingement- means the entrapment of all life stages of fish and shellfish on the outer part of an intake structure or against a screening device during periods of intake water withdrawal.

The ***Daily Maximum Amount*** is a limitation measured in pounds per day (lb/day), on the total amount of any pollutant in the discharge by weight during any calendar day.

The ***Daily Maximum Concentration*** is a limitation on the average concentration, in milligrams per liter (mg/L), of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

"Degradation" means the alteration of the properties of waters by the addition of pollutants, withdrawal of water, or removal of habitat, except those alterations of a short duration.

"***De Minimis***" - Degradation of a small magnitude, as provided in this paragraph.

(a) Discharges and withdrawals

1. Subject to the limitation in part 3 of this subparagraph, a single discharge other than those from new domestic wastewater sources will be considered de minimis if it uses less than five percent of the available assimilative capacity for the substance being discharged.

2. Subject to the limitation in part 3 of this subparagraph, a single water withdrawal will be considered de minimis if it removes less than five percent of the 7Q10 flow of the stream.

3. If more than one activity described in part 1 or 2 of this subparagraph has been authorized in a segment and the total of the authorized and proposed impacts uses no more than 10% of the assimilative capacity, or 7Q10 low flow, they are presumed to be de minimis. Where the total of the authorized and proposed impacts uses 10% of the assimilative capacity, or 7Q10 low flow, additional degradation may only be treated as de minimis if the Division finds on a scientific basis that the additional degradation has an insignificant effect on the resource.

(b) Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are de minimis if the Division finds that the impacts, individually and cumulatively are offset by impact minimization and/or in-system mitigation, provided however, in ONRWs the mitigation must occur within the ONRW.

Discharge or "discharge of a pollutant" refers to the addition of pollutants to waters from a source.

Dry Weather Flow shall be construed to represent discharges consisting of process and/or non-process wastewater only.

An ***ecoregion*** is a relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.

The ***geometric mean*** of any set of values is the n^{th} root of the product of the individual values where "n" is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For the purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).

A ***Grab Sample***, for the purposes of this permit, is defined as a single effluent sample of at least 100 milliliters (sample volumes <100 milliliters are allowed when specified per standard methods, latest edition) collected at a randomly selected time over a period not exceeding 15 minutes. The sample(s) shall be collected at the period(s) most representative of the total discharge.

The ***Instantaneous Concentration*** is a limitation on the concentration, in milligrams per liter (mg/L), of any pollutant contained in the discharge determined from a grab sample taken at any point in time.

The ***monthly average amount*** shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.

The ***monthly average concentration***, other than for *E. coli* bacteria, is the arithmetic mean of all the composite or grab samples collected in a one-calendar month period.

A ***one week period*** (or ***calendar-week***) is defined as the period from Sunday through Saturday. For reporting purposes, a calendar week that contains a change of month shall be considered part of the latter month.

Pollutant means sewage, industrial wastes, or other wastes.

A **Qualifying Storm Event** is one which is greater than 0.1 inches and that occurs after a period of at least 72 hours after any previous storm event with rainfall of 0.1 inches or greater.

For the purpose of this permit, a ***Quarter*** is defined as any one of the following three month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, or October 1 through December 31.

A ***rainfall event*** is defined as any occurrence of rain, preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each other will be considered a single rainfall event.

A ***rationale*** (or “fact sheet”) is a document that is prepared when drafting an NPDES permit or permit action. It provides the technical, regulatory and administrative basis for an agency’s permit decision.

A ***reference site*** means least impacted waters within an ecoregion that have been monitored to establish a baseline to which alterations of other waters can be compared.

A ***reference condition*** is a parameter-specific set of data from regional reference sites that establish the statistical range of values for that particular substance at least-impacted streams.

For the purpose of this permit, ***Semi-annually*** means the same as "once every six months." Measurements of the effluent characteristics concentrations may be made anytime during a 6 month period beginning from the issuance date of this permit so long as the second set of measurements for a given 12 month period are made approximately 6 months subsequent to that time, if feasible.

A ***subecoregion*** is a smaller, more homogenous area that has been delineated within an ecoregion.

Utility water, for the purpose of this permit, and as identified in the authorized discharges includes area wash-downs with potable water, eye wash & safety shower water (potable), uncontaminated steam condensate and all items identified in Section 3.1.2 of TMSP Permit No. TNR050000.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

The term, ***washout*** is applicable to activated sludge plants and is defined as loss of mixed liquor suspended solids (MLSS) of 30.00% or more from the aeration basin(s).

Waters means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion

thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

The ***weekly average amount*** shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar week when the measurements were made.

The ***weekly average concentration*** is the arithmetic mean of all the composite samples collected in a one-week period. The permittee must report the highest weekly average in the one-month period.

Wet Weather Flow shall be construed to represent storm water runoff which, in combination with all process and/or non-process wastewater discharges, as applicable, is discharged during a qualifying storm event.

D. ACRONYMS AND ABBREVIATIONS

1Q10 – 1-day minimum, 10-year recurrence interval
30Q5 – 30-day minimum, 5-year recurrence interval
7Q10 – 7-day minimum, 10-year recurrence interval
BAT – best available technology economically achievable
BCT – best conventional pollutant control technology
BDL – below detection level
BOD_5 – five day biochemical oxygen demand
BPT – best practicable control technology currently available
$CBOD_5$ – five day carbonaceous biochemical oxygen demand
CEI – compliance evaluation inspection
CFR – code of federal regulations
CFS – cubic feet per second
CFU – colony forming units
CIU – categorical industrial user
CSO – combined sewer overflow
DMR – discharge monitoring report
D.O. – dissolved oxygen
E. coli – Escherichia coli
EFO – environmental field office
LB(lb) - pound
IC_{25} – inhibition concentration causing 25% reduction in survival, reproduction and growth of the test organisms
IU – industrial user
IWS – industrial waste survey
LC_{50} – acute test causing 50% lethality
MDL – method detection level
MGD – million gallons per day
MG/L(mg/l) – milligrams per liter
ML – minimum level of quantification

ml – milliliter
MLSS – mixed liquor suspended solids
MOR – monthly operating report
NODI – no discharge
NPDES – national pollutant discharge elimination system
PL – permit limit
POTW – publicly owned treatment works
RDL – required detection limit
SAR – semi-annual [pretreatment program] report
SIU – significant industrial user
SSO – sanitary sewer overflow
STP – sewage treatment plant
TCA – Tennessee code annotated
TDEC – Tennessee Department of Environment and Conservation
TIE/TRE – toxicity identification evaluation/toxicity reduction evaluation
TMDL – total maximum daily load
TRC – total residual chlorine
TSS – total suspended solids
WQBEL – water quality based effluent limit

E. REPORTING

1. Monitoring Results

Monitoring results shall be recorded monthly and submitted monthly using NETDMR. Submittals shall be no later than 15 days after the completion of the reporting period. If NETDMR is not functioning, a completed DMR with an original signature shall be submitted to the following address:

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
COMPLIANCE & ENFORCEMENT SECTION
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

If NETDMR is not functioning, a copy of the completed and signed DMR shall be mailed to the Chattanooga Environmental Field Office (EFO) at the following address:

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
Chattanooga Environmental Field Office
1301 Riverfront Parkway, Suite 206
Chattanooga, Tennessee 37402

A copy should be retained for the permittee's files. In addition, any communication regarding compliance with the conditions of this permit must be sent to the two offices listed above.

The first DMR is due on the 15th of the month following permit effectiveness.

DMRs and any other information or report must be signed and certified by a responsible corporate officer as defined in 40 CFR 122.22, a general partner or proprietor, or a principal municipal executive officer or ranking elected official, or his duly authorized representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

The electronic submission of DMR data will be accepted only if formally approved beforehand by the division. For purposes of determining compliance with this permit, data approved by the division to be submitted electronically is legally equivalent to data submitted on signed and certified DMR forms.

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant specifically limited by this permit more frequently than required at the location(s) designated, using approved analytical methods as specified herein, the results of such monitoring shall be included in the calculation and reporting of the values required in the DMR form. Such increased frequency shall also be indicated on the form.

3. Falsifying Results and/or Reports

Knowingly making any false statement on any report required by this permit or falsifying any result may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in Section 69-3-115 of the Tennessee Water Quality Control Act.

4. Outlier Data

Outlier data include analytical results that are probably false. The validity of results is based on operational knowledge and a properly implemented quality assurance program. False results may include laboratory artifacts, potential sample tampering, broken or suspect sample containers, sample contamination or similar demonstrated quality control flaw.

Outlier data are identified through a properly implemented quality assurance program, and according to ASTM standards (e.g. Grubbs Test, 'h' and 'k' statistics). Furthermore, outliers should be verified, corrected, or removed, based on further inquiries into the matter. If an outlier was verified (through repeated testing and/or analysis), it should remain in the preliminary data set. If an outlier resulted from a transcription or similar clerical error, it should be corrected and subsequently reported.

Therefore, only if an outlier was associated with problems in the collection or analysis of the samples and as such does not conform with the Guidelines Establishing Test Procedures for the Analysis of Pollutants (40 CFR §136), it can be removed from the data set and not reported on the Discharge Monitoring Report forms (DMRs). Otherwise, all results (including monitoring

of pollutants more frequently than required at the location(s) designated, using approved analytical methods as specified in the permit) should be included in the calculation and reporting of the values required in the DMR form. You are encouraged to use “comment” section of the DMR form (or attach additional pages), in order to explain any potential outliers or dubious results.

F. SCHEDULE OF COMPLIANCE

Full compliance and operational levels shall be attained from the effective date of this permit.

PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

Permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of the Division of Water Resources (the "Director") no later than 180 days prior to the expiration date. Such applications must be properly signed and certified.

2. Right of Entry

The permittee shall allow the Director, the Regional Administrator of the U.S. Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;

b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and

c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Water Pollution Control Act, as amended, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Resources. As required by the Federal Act, effluent data shall not be considered confidential.

4. Proper Operation and Maintenance

a. The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

b. Dilution water shall not be added to comply with effluent requirements to achieve BCT, BPT, BAT and/or other technology-based effluent limitations such as those in State of Tennessee Rule 0400-40-05-.09.

5. Treatment Facility Failure

The permittee, in order to maintain compliance with this permit, shall control production, all discharges, or both, upon reduction, loss, or failure of the treatment facility, until the facility is restored or an alternative method of treatment is provided. This requirement applies in such situations as the reduction, loss, or failure of the primary source of power.

6. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

7. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

8. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

2. Permit Modification, Revocation, or Termination

a. This permit may be modified, revoked and reissued, or terminated for cause as described in 40 CFR 122.62 and 122.64, Federal Register, Volume 49, No. 188 (Wednesday, September 26, 1984), as amended.

b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

c. If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for any toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act, as amended, the Director shall modify or revoke and reissue the permit to conform to the prohibition or to the effluent standard, providing that the effluent standard is more stringent than the limitation in the permit on the toxic pollutant. The permittee shall comply with these effluent standards or prohibitions within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified or revoked and reissued to incorporate the requirement.

d. The filing of a request by the permittee for a modification, revocation, reissuance, termination, or notification of planned changes or anticipated noncompliance does not halt any permit condition.

3. Change of Ownership

This permit may be transferred to another party (provided there are neither modifications to the facility or its operations, nor any other changes which might affect the permit limits and conditions contained in the permit) by the permittee if:

a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and

c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

Pursuant to the requirements of 40 CFR 122.61, concerning transfer of ownership, the permittee must provide the following information to the division in their formal notice of intent to transfer ownership: 1) the NPDES permit number of the subject permit; 2) the effective date of the proposed transfer; 3) the name and address of the transferor; 4) the name and address of the transferee; 5) the names of the responsible parties for both the transferor and transferee; 6) a statement that the transferee assumes responsibility for the subject NPDES permit; 7) a statement that the transferor relinquishes responsibility for the subject NPDES permit; 8) the signatures of the responsible parties for both the transferor and transferee pursuant to the requirements of 40 CFR 122.22(a), “Signatories to permit applications”; and, 9) a statement regarding any proposed modifications to the facility, its operations, or any other changes which might affect the permit limits and conditions contained in the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

All discharges shall be consistent with the terms and conditions of this permit. Any permit noncompliance constitutes a violation of applicable State and Federal laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the Division of Water Resources in the appropriate regional Field Office within 24-hours from the time

the permittee becomes aware of the circumstances. (The regional Field Office should be contacted for names and phone numbers of environmental response personnel).

A written submission must be provided within five calendar days of the time the permittee becomes aware of the circumstances, unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

i. A description of the discharge and cause of noncompliance;

ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

iii. The steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.a. above, the permittee shall report the noncompliance on the Discharge Monitoring Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

3. Sanitary Sewer Overflow

a. "***Sanitary Sewer Overflow***" means the discharge to land or water of wastes from any portion of the collection, transmission, or treatment system other than through permitted outfalls.

b. Sanitary Sewer Overflows are prohibited.

c. The permittee shall operate the collection system so as to avoid sanitary sewer overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic sanitary sewer overflows (greater than 5 events per year) or would otherwise overload any portion of the system.

d. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic overflow point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment

to a Monthly Operating Report submitted to the regional TDEC Field Office. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

e. In the event that more than five (5) sanitary sewer overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Resources field office staff to petition for a waiver based on mitigating evidence.

4. Upset

a. "***Upset***" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i. An upset occurred and that the permittee can identify the cause(s) of the upset;

ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

iii. The permittee submitted information required under "Reporting of Noncompliance" within 24-hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and

iv. The permittee complied with any remedial measures required under "Adverse Impact."

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6. Bypass

a. "***Bypass***" is the intentional diversion of wastewater away from any portion of a treatment facility. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypasses are prohibited unless the following 3 conditions are met:

i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There are not feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down-time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass, which occurred during normal periods of equipment down-time or preventative maintenance;

iii. The permittee submits notice of an unanticipated bypass to the Division of Water Resources in the appropriate environmental assistance center within 24-hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the Director, if possible, at least 10 days before the date of the bypass.

c. Bypasses not exceeding limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 6.b.iii, above.

7. Washout

a. For domestic wastewater plants only, a "washout" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.

b. A washout is prohibited. If a washout occurs the permittee must report the incident to the Division of Water Resources in the appropriate regional Field Office within 24-hours by telephone. A written submission must be provided within 5 days. The washout must be noted on the discharge monitoring report. Each day of a washout is a separate violation.

D. LIABILITIES

1. Civil and Criminal Liability

Except as provided in permit conditions for "**Bypass,**" "**Overflow,**" and "**Upset,**" nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or the Federal Water Pollution Control Act, as amended.

PART III

OTHER REQUIREMENTS

A. TOXIC POLLUTANTS

The permittee shall notify the Division of Water Resources as soon as it knows or has reason to believe:

1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic substance(s) (listed at 40 CFR 122, Appendix D, Table II and III) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

    a. One hundred micrograms per liter (100 ug/l);

    b. Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

    c. Five (5) times the maximum concentration value reported for that pollutant(s) in the permit application in accordance with 122.21(g)(7); or

    d. The level established by the Director in accordance with 122.44(f).

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

   a. Five hundred micrograms per liter (500 ug/l);

   b. One milligram per liter (1 mg/L) for antimony;

   c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 122.21(g)(7); or

   d. The level established by the Director in accordance with 122.44(f).

B. REOPENER CLAUSE

If an applicable standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(B)(2), and 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked and reissued to conform to that effluent standard or limitation.

C. PLACEMENT OF SIGNS

Within sixty (60) days of the effective date of this permit, the permittee shall place and maintain a sign(s) at each outfall and any bypass/overflow point in the collection system. For the purposes of this requirement, any bypass/overflow point that has discharged five (5) or more times in the last year must be so posted. The sign(s) should be clearly visible to the public from the bank and the receiving stream or from the nearest public property/right-of-way, if applicable. The minimum sign size should be two feet by two feet (2' x 2') with one inch (1") letters. The sign should be made of durable material and have a white background with black letters.

The sign(s) are to provide notice to the public as to the nature of the discharge and, in the case of the permitted outfalls, that the discharge is regulated by the Tennessee Department of Environment and Conservation, Division of Water Resources. The following are given as examples of the minimal amount of information that must be included on the sign:

TREATED INDUSTRIAL WASTEWATER AND UTILITY WATER or
RIVER WATER INTAKE RETURN WATER
Wacker Polysilicon North America, LLC
(Permittee's Phone Number)
NPDES Permit NO. TN0081311
TENNESSEE DIVISION OF WATER RESOURCES
1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Chattanooga

INDUSTRIAL STORM WATER RUNOFF, UTILITY WATER, HYDROSTATIC TESTING WATER and/or
CONSTRUCTION STORM WATER RUNOFF
Wacker Polysilicon North America, LLC
(Permittee's Phone Number)
NPDES Permit NO. TN0081311
TENNESSEE DIVISION OF WATER RESOURCES
1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Chattanooga

D. ANTIDEGRADATION

Pursuant to the Rules of the Tennessee Department of Environment and Conservation, Chapter 0400-40-03-.06, titled "Tennessee Antidegradation Statement," which prohibits the degradation of exceptional Tennessee waters and the increased discharges of substances that cause or contribute to impairment, the permittee shall further be required, pursuant to the terms and conditions of this permit, to comply with the effluent limitations and schedules of compliance required to implement applicable water quality standards, to comply with a State Water Quality Plan or other state or federal laws or regulations, or where practicable, to comply with a standard permitting no discharge of pollutants.

E. BIOMONITORING REQUIREMENTS, ACUTE

The permittee shall conduct a 48-hour static acute toxicity test on two test species on the same samples of final effluent from Outfall 001. The test species to be used are Water Fleas (*Ceriodaphnia dubia)* and Fathead Minnows *(Pimephales promelas*).

The measured endpoint for toxicity will be the concentration causing 50% lethality (LC50) of the test organisms. The LC50 shall be determined based on a 50% lethality as compared to the controls.

Test shall be conducted and its results reported based on appropriate replicates of a total of five serial dilutions and a control, using the percent effluent dilutions as presented in the following table:

Tier 1 Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
4 X PL	**2 X PL**	**Permit Limit (PL)**	**0.50 X PL**	**0.25 X PL**	**Control**
% effluent					
4.88	**2.44**	**1.22**	**0.61**	**0.31**	**0**

Tier 2 Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
4 X PL	**2 X PL**	**Permit Limit (PL)**	**0.50 X PL**	**0.25 X PL**	**Control**
% effluent					
12	**6**	**3.00**	**1.5**	**0.75**	**0**

Tier 3 Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
4 X PL	**2 X PL**	**Permit Limit (PL)**	**0.50 X PL**	**0.25 X PL**	**Control**
% effluent					
19.2	**9.6**	**4.80**	**2.4**	**1.2**	**0**

The dilution/control water used will be a moderately hard water as described in Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012 (or the most current edition). Results from an acute standard reference toxicant quality assurance test for each species tested shall be submitted with the discharge monitoring report. Reference toxicant tests shall be conducted as required in EPA-821-R-02-012 (or the most current edition). Additionally, the analysis of this multi-concentration test shall include review of the concentration-response relationship to ensure that calculated test results are interpreted appropriately.

Toxicity will be demonstrated if the LC50 is less than or equal to the permit limit indicated for each outfall in the above table(s). Toxicity demonstrated by the tests specified herein constitutes a violation of this permit.

All tests will be conducted using four separate grab samples of final effluent, to be used in four separate tests, and shall be collected at evenly spaced (6-hour) intervals over a 24-hour period. If, in any control more than 10% of the test organisms die in 48 hours, the test (control and effluent) is considered invalid and the test shall be repeated within 30 days of the date the initial test is invalidated. Furthermore, if the results do not meet the acceptability criteria as defined in Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012, or if the required concentration-response review fails to yield a valid relationship per guidance contained in Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing, EPA-821-B-00-004 (or the most current edition), that test shall be repeated. Any test initiated but terminated before completion must also be reported along with a complete explanation for the termination.

The toxicity tests specified herein shall be conducted annually (once per year) for Outfall 001 and begin no later than 180 days from the effective date of this permit.

In the event of a test failure, the permittee must start a follow-up test within 2 weeks and submit results from a follow-up test within 30 days from obtaining initial WET testing results. The follow-up test must be conducted using the same serial dilutions as presented in the corresponding table(s) above. **The follow-up test will not negate an initial failed test. In addition, the failure of a follow-up test will constitute a separate permit violation which must also be reported.**

In the event of 2 consecutive test failures or 3 test failures within a 12 month period for the same outfall, the permittee must initiate a Toxicity Identification Evaluation/Toxicity Reduction Evaluation (TIE/TRE) study within 30 days and so notify the division by letter. This notification shall include a schedule of activities for the initial investigation of that outfall. **During the term of the TIE/TRE study, the frequency of biomonitoring shall be once every three months.** Additionally, the permittee shall submit progress reports once every three months throughout the term of the TIE/TRE study. The toxicity must be reduced to allowable limits for that outfall within 2 years of initiation of the TIE/TRE study. Subsequent to the results obtained from the TIE/TRE studies, the permittee may request an extension of the TIE/TRE study period if necessary to conduct further analyses. The final determination of any extension period will be made at the discretion of the division.

The TIE/TRE study may be terminated at any time upon the completion and submission of 2 consecutive tests (for the same outfall) demonstrating compliance. Following the completion of TIE/TRE study, the frequency of monitoring will return to a regular schedule, as defined previously in this section as well in Part I of the permit. **During the course of the TIE/TRE study, the permittee will continue to conduct toxicity testing of the outfall being investigated at the frequency of once every three months but will not be required to perform follow-up tests for that outfall during the period of TIE/TRE study.**

Test procedures, quality assurance practices and determination of effluent lethality values will be made in accordance with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012, or the most current edition.

Results of all tests, reference toxicant information, copies of raw data sheets, statistical analysis and chemical analysis shall be compiled in a report. The report shall be written in accordance with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012, or the most current edition.

Two copies of biomonitoring reports (including follow-up reports) shall be submitted to the division. One copy of the report shall be submitted along with the discharge monitoring report (DMR). The second copy shall be submitted to the local Division of Water Resources office address:

Environmental Field Office - Chattanooga
Division of Water Resources
1301 Riverfront Parkway, Suite 206
Chattanooga, TN 37402

F. PRIORITY POLLUTANTS

Within 6 months after the facility has reached design or long term production capacity (including the HDK process) and before the application for permit renewal deadline (180 days before expiration), the permittee shall submit to the Division of Water Resources a completed Application Form 2C - Wastewater Discharge Information, Consolidated Permits Program (EPA Form 3510-2C).

PART IV

Industrial Stormwater Pollution Prevention Plan Requirements

3.1 The stormwater pollution prevention plan shall be prepared prior to and implemented immediately upon commencement of industrial activities (i.e. exposure of significant materials) at the facility.

3.2 Contents of Plan. The plan shall include, at a minimum, the following items:

3.2.1 Pollution Prevention Team. Each plan shall identify a specific individual or individuals within the facility organization as members of a stormwater Pollution Prevention Team that are responsible for developing the stormwater pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's stormwater pollution prevention plan.

3.2.2 Description of Potential Pollutant Sources. Each plan shall provide a description of potential sources that may reasonably be expected to add significant amounts of pollutants to stormwater discharges or that may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials that may potentially be significant pollutant sources. Each plan shall include, at a minimum:

3.2.2.1 Drainage. A site map indicating an outline of the portions of the drainage area of each stormwater outfall that are within the facility boundaries, each existing structural control measure to reduce pollutants in stormwater runoff, surface water bodies, locations where significant materials are exposed to precipitation, locations where major spills or leaks identified under 3.2.2.3 (spills and leaks) of this permit have occurred, and the locations of the following activities where such activities are exposed to precipitation: fueling stations, vehicle and equipment maintenance and/or cleaning areas, loading/unloading areas, locations used for the treatment, storage or disposal of wastes, liquid storage tanks, processing areas and storage areas including areas where raw materials, finished products and drums are stored. The map must indicate the outfall locations and the types of discharges contained in the drainage areas of the outfalls.

For each area of the facility that generates stormwater discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants, the plan should include a prediction of the direction of flow, and an identification of the types of pollutants that are likely to be present in stormwater discharges associated with industrial activity. Factors to consider include the toxicity of a chemical; quantity of chemicals used, produced or discharged; the likelihood of contact with stormwater; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.

3.2.2.2 Inventory of Exposed Materials - An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that may be handled, treated, stored or disposed in a manner to allow exposure to stormwater; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with stormwater runoff; the location and a description of existing structural and nonstructural control measures to reduce pollutants in stormwater runoff; and a description of any treatment the stormwater receives.

3.2.2.3 Spills and Leaks - A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a stormwater conveyance at the facility after the date of 3 years prior to the date of the commencement of industrial activities to be covered under this permit. Such list shall be updated as appropriate during the term of the permit.

3.2.2.4 Sampling Data - A summary of existing discharge sampling data describing pollutants in stormwater discharges from the facility (or comparable facilities).

3.2.2.5 Risk Identification and Summary of Potential Pollutant Sources - A narrative description of the potential pollutant sources from the following activities: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., biochemical oxygen demand, etc.) of concern shall be identified.

3.2.3 Measures and Controls. Each facility covered by this permit shall develop a description of stormwater management controls appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of stormwater management controls shall address the following minimum components, including a schedule for implementing such controls:

3.2.3.1 Good Housekeeping - Good housekeeping requires the maintenance of areas that may contribute pollutants to stormwater discharges in a clean, orderly manner. Particular attention should be paid to areas where raw materials are stockpiled, material handling areas, storage areas, liquid storage tanks, material handling areas, and loading/unloading areas. The areas surrounding storm drain inlets and outfall points should also be free of material that could discharge off-site and contribute to pollutants in stormwater.

3.2.3.2 Preventive Maintenance - A preventive maintenance program shall involve timely inspection and maintenance of stormwater management devices (e.g., cleaning oil/water separators, catch basins) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems.

3.2.3.3 Spill Prevention and Response Procedures - Areas where potential spills that can contribute pollutants to stormwater discharges can occur, and their accompanying drainage points shall be identified clearly in the stormwater pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean-up should be available to personnel.

3.2.3.4 Inspections - In addition to or as part of the comprehensive site evaluation required under this section, qualified facility personnel shall be identified to inspect designated equipment and areas of the facility at appropriate intervals specified in the SWPPP. Material storage and handling areas, liquid storage tanks, hoppers or silos, vehicle and equipment maintenance, cleaning, and fueling areas, material handling vehicles, equipment and processing areas shall be inspected at least once per month as part of the maintenance program. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained as part of the SWPPP. The use of a checklist developed by the facility is encouraged.

3.2.3.5 Employee Training - Employee training programs shall inform personnel responsible for implementing activities identified in the stormwater pollution prevention plan or otherwise responsible for stormwater management at all levels of responsibility of the components and goals of the stormwater pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify periodic dates for such training.

3.2.3.6 Recordkeeping and Internal Reporting Procedures - A description of incidents (such as spills, or other discharges), along with other information describing the quality and quantity of stormwater discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

3.2.3.7 Non-stormwater Discharges

3.2.3.7.1 The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-stormwater discharges. The certification shall include the identification of potential significant sources of non-stormwater at the site, a description of the results of any test and/or evaluation for the presence of non-stormwater discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with section I E 1. of this permit. Such certification may not be feasible if the facility operating the stormwater discharge associated with industrial activity does not have access to an outfall, manhole, or other point of access to the ultimate conduit that receives the discharge. In such cases, the source identification section of the stormwater pollution prevention plan shall indicate why the certification required by this part was not feasible, along with the identification of potential significant sources of non-

stormwater at the site. A discharger that is unable to provide the certification required by this paragraph must notify the Division of Water Resources in accordance with paragraph 3.2.3.7.3 “Failure to Certify” (below).

3.2.3.7.2 Sources of non-stormwater that are combined with stormwater discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Any non-stormwater discharges that are not authorized under this permit or another NPDES permit should be brought to the attention of the division’s local Environmental Field Office.

3.2.3.7.3 Failure to Certify - Any facility that is unable to provide the certification required (testing for non-stormwater discharges), must notify the Division of Water Resources not later than 180 days after obtaining coverage by this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-stormwater discharges; the results of such test or other relevant observations; potential sources of non-stormwater discharges to the storm sewer; and why adequate tests for such storm sewers were not feasible. Non-stormwater discharges to waters of the state that are not authorized by an NPDES permit are unlawful, and must be terminated.

3.2.3.8 Sediment and Erosion Control - The plan shall identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

3.2.3.9 Management of Runoff - The plan shall contain a narrative consideration of the appropriateness of traditional stormwater management practices (practices other than those that control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage stormwater runoff in a manner that reduces pollutants in stormwater discharges from the site. The plan shall provide that measures that the permittee determines to be reasonable and appropriate shall be implemented and maintained. The potential of various sources at the facility to contribute pollutants to stormwater discharges associated with industrial activity [see paragraph 3.2.2 of this section (Description of Potential Pollutant Sources)] shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: vegetated swales, reuse of collected stormwater (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), infiltration devices, and detention/retention basins or other equivalent measures.

3.2.4 Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the SWPPP, but in no case less than once a year. Evaluations shall be conducted at least once at portable plant locations that are not in operation for a complete year. Such evaluations shall provide:

3.2.4.1 Areas contributing to a stormwater discharge associated with industrial activity including; material storage and handling areas, liquid storage tanks, hoppers or silos, vehicle and equipment maintenance, cleaning, and fueling areas, material handling vehicles, equipment and processing areas, and areas where aggregate is stockpiled outdoors shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system (and potentially waters of the state). Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural stormwater management measures, (e.g., oil/water separators, detention ponds, sedimentation basins or equivalent measures) sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as dust collection equipment and spill response equipment, shall be made.

3.2.4.2 Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with 3.2.2 of this section (description of potential pollutant sources) and pollution prevention measures and controls identified in the plan in accordance with section 3.2.3 of this sector (measures and controls) shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner, but in no case later than 12 weeks after the evaluation.

3.2.4.3 A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the stormwater pollution prevention plan, and actions taken in accordance with paragraph (4)(b) (above) of the permit shall be made and retained as part of the stormwater pollution prevention plan for at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the stormwater pollution prevention plan and this permit. The report shall be signed in accordance with section I E 1. of this permit.

3.2.4.4 Where compliance evaluation schedules overlap with inspections, the compliance evaluation may be conducted in place of one such inspection.

ADDENDUM TO RATIONALE

Wacker Polysilicon North America, LLC
NPDES PERMIT NO. TN0081311
Charleston, Bradley County, Tennessee

Permit Writer: Mr. Paul Higgins
March 13, 2017

Mr. Shane Geren of Wacker Polysilicon NA, LLC offered comments on the draft permit by a letter dated February 27, 2017. The comments clarified the discharge locations (outfalls) of various types of stormwater and incidental process wastewater including hydrostatic testing wastewater and utility water. The permit writer had asked the permittee to review these stormwater outfalls and clarify any discharges of stormwater and miscellaneous wastewater that may be discharged to the stormwater outfalls both currently and over the term of the permit. Wacker reviewed the draft permit and provided the changes in the comment letter. These changes did not add any additional discharges or change the character of discharges from the facility. Only the locations of discharges (outfalls) were changed.

Additionally, the permittee made minor changes (less than river 1 mile) in the location of outfalls and requested that the new address on Wacker Boulevard be used in the future. All the changes were incorporated into the final permit and there is no substantial change to permit requirements. The permit is to be issued effective April 1, 2017.

RATIONALE

Wacker Polysilicon North America, LLC

NPDES PERMIT NO. TN0081311
Charleston, Bradley County, Tennessee

Permit Writer: Mr. Paul Higgins
January 23, 2017

I. DISCHARGER

Wacker Polysilicon North America, LLC
553 Wacker Blvd, P.O. Box 446
Charleston, Bradley County, Tennessee
Site Longitude: -84.796944 Site Latitude: 35.301362

Official Contact Person:
Mr. Jeremy Copeland
Environmental Manager
(423) 780-8160

Nature of Business:
Production of hyperpure polycrystalline silicon for the photovoltaic market. Renewall to authorize SW discharges associated with construction and industrial activity, hydrostatic testing discharges, manufacturing of silica byproduct, and to identify future phases of production capacity as well as the previously permitted process wastewater and noncontact cooling water .

SIC Code(s):	**2819**
Industrial Classification:	**Secondary, w/o ELG**
Discharger Rating:	**Minor**

II. PERMIT STATUS

Issued January 02, 2012
Last modified March 01, 2015
Expired January 01, 2017
Application for renewal received July 5, 2016

Watershed Scheduling

Environmental Field Office: Chattanooga
Primary Outfall Longitude: -84.7859 Primary Outfall Latitude: 35.3144
Hydrocode: 6020002 Watershed Group: 2
Watershed Identification: Hiwassee
Target Reissuance Year: 2017

III. FACILITY DISCHARGES AND RECEIVING WATERS

In the application for renewal of permit TN0081311, Wacker Polysilicon North America, LLC (Wacker) informed the division that the facility had virtually completed the construction phase and was in operation. Some additional relatively minor construction remains, including some stabilization and the construction of an HDK process to produce byproduct silica. Wacker requested changes to outfall designations, discharge characteristics, and positions to align discharges with the final operational configuration. The changes are as follows:

Under the proposed draft permit, Wacker Polysilicon North America, LLC is authorized to discharge process wastewater, non-contact cooling water and utility water from Outfall 001, return water from river water intake from Outfall 002, industrial and construction stormwater, utility water, and hydrostatic testing water from Outfall SW1, construction stormwater from Outfall SW2, construction stormwater and utility water from Outfall SW2A, industrial and construction stormwater and utility water from Outfall SW3, and industrial and construction stormwater, utility water, and hydrostatic testing water from SW4.

These outfalls are located as follows: Outfall 001 at the Hiwassee River Embayment of Chickamauga Reservoir at mile 15.9, Outfall 002 at the Hiwassee River Embayment of Chickamauga Reservoir at mile 16.5, Outfall SW1 at the Hiwassee River Embayment of Chickamauga Reservoir (South Mouse Creek) at mile 1.7, Outfall SW4 at the Hiwassee River Embayment of Chickamauga Reservoir (South Mouse Creek) at mile 1.4, Outfalls SW2 and SW2A at South Mouse Creek at mile 2.5, and Outfall SW3 at South Mouse Creek at mile 2.55. Additional information on outfalls and receiving streams can be found in *Appendix 1.*

All industrial and construction stormwater runoff for this site is now permitted under the proposed draft individual permit.

IV. APPLICABLE EFFLUENT LIMITATIONS GUIDELINES

The Standard Industrial Classification (SIC) code for Wacker Polysilicon North America, LLC is 2819 (Production of Inorganic Chemicals, NEC). There are no Effluent Limitation Guidelines applicable to this facility.

V. PREVIOUS PERMIT LIMITS AND MONITORING REQUIREMENTS

Since there is no change in the permit limits in the draft permit other than the changes to outfall designations and the consolidation of general permit coverages into the individual permit, the previous permit limits have not been included.

VI. HISTORICAL MONITORING AND INSPECTION

The first Discharge Monitoriing Report was filed for the month of June 2015 with the first discharge from the facility. Approximately one year later the plant was estimated to be at 34% of capacity. A review of the Discharge Monitoring Reports (DMRs) indicates compliance with the permit limits. A summary of the data reported on Discharge Monitoring Report forms during the previous permit term is summarized in Appendix 2.

Since the facility has been in construction and startup mode, the facility has not recived an NPDES compliance inspection. An inspection is scheduled for 2017.

VII. NEW PERMIT LIMITS AND MONITORING REQUIREMENTS

The proposed new permit limits have been selected by determining a technology-based limit and evaluating if that limit protects the water quality of the receiving stream. If the technology-based limit would cause violations of water quality, the water quality-based limit is chosen. The technology-based limit is determined from EPA effluent limitations guidelines if applicable (see Part IV); or from State of Tennessee maximum effluent limits for effluent limited segments per Rule 0400-40-05-.08. Note that in general, the term “anti-backsliding” refers to a statutory provision that prohibits the renewal, reissuance, or modification of an existing NPDES permit that contains effluents limits, permit conditions, or standards that are less stringent than those established in the previous permit.

Metals and Toxics

The previous permit *Rationale* contained an evaluation of toxic pollutants that were reasonably expected to be present in the process water discharges from the Wacker facility; copper, nickel, chromium VI, and zinc. Using estimated discharge data provided on the original application and stream background concentrations, water quality calculations were performed to check two conditions, the de minimus status of the metals discharge concentrations at Tier 1 production levels and reasonable potential of a water quality issue from metals at higher production rates (Tier 3).

As required in the previous permit, Wacker provided sampling data on these pollutants on EPA Form 2C with the permit application. This data was evaluated and the results may be found in *Appendix 2A.* There are two spread sheets that use the allowable effluent concentrations (assimilative capacity for metals) that were calculated based on Tier 1 and Tier 3 flows and the actual effluent concentrations provided by the permittee. The calculations show that, in the case of both the Tier 1 and Tier 3 production rates, the metals are still a fraction of the de minimis level of 5% of assimilative capacity. It should be noted that the calculated effluent values for chromium are for chromium VI, the most toxic form of the pollutant. The permittee analyzed for total chromium, resulting in a worst case scenario by assuming that all the chromium is in the most toxic form. These results indicate that there is no reasonable potential for these trace metals to cause water quality issues. Even though these results indicate that the metals should not be a problem, Wacker has stated that the plant is still

approaching the Tier 1 capacity. Since this facility is not yet up to capacity and a new process (HDK fumed silica process) will be coming on line in 2019, it is possible that there may also be changes in the process water effluent. Therefore, this draft permit requires that EPA Form 2C sampling must be completed and reported with the application for renewal of the permit.

Flow

Flow is monitored so that the load of pollutants discharged to the receiving stream can be calculated. Flow shall be reported in Million Gallons per Day (MGD) and monitored at the time of sample collection.

Total Dissolved and Total Suspended Solids (TDS & TSS)

Total Suspended Solids is a general indicator of the quality of a wastewater and will be limited in this permit. Total Dissolved Solids (sometimes expressed as chlorides + sulfates) issues are related to aquatic toxicity as well as domestic and industrial water supply criteria.

Comment number 5 in the *Addendum to Rationale* dated December 28, 2011 and the division's answer established the TSS as a report only parameter that Wacker believed would be in the range of 50 mg/l average and 100 mg/l daily maximum. Wacker presented the following information in a meeting with the division on December 1, 2016.

Wacker Polysilicon Plant Current Status

- Wacker Plant is at final production ramp phase and near full production rate
- Site core production processes are generally stable and process outputs (i.e., wastewater, waste gases, waste materials) are normalized to longer term levels
- The WWT plant is operating in good performance and near the estimated 2011 permit application TSS values of 50 – 100 mg/L

2016 Wastewater Effluent Data Summary – Monthly Averages (Through Oct.)		
pH	TDS (lb/day)	TSS (mg/L)
8.0	61,782	122

WACKER

slide 4

The primary reason for the higher than predicted TSS average is that the actual plant process conditions are more variable than the lab/pilot conditions used to design the centrifuges. The centrifuges have also developed mechanical failure as a result of inconsistent feed and other process problems. The inconsistency is evident when reviewing the DMR daily maximum TSS values in *Appendix 2.* On the other hand, the TDS effluent values are well within permit limits and design expectations. At the December meeting, Wacker presented a solution to the TSS variability problem. By installing the HDK byproduct silica process, the net effect on the effluent will be to decrease TSS and TDS and possibly slightly lower the discharge flow rate. The centrifuges will be removed from the process entirely. In consideration of this change, the current permit limitations will remain unchanged.

In addition to these specific limits, the State of Tennessee Water Quality Standards for the protection of Fish & Aquatic Life [Chapter 0400-40-03-.03(3) (c)] state there shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character that may be detrimental to fish and aquatic life in the receiving stream. The division believes that, considering the nature facility discharges, these narrative criteria are being met.

pH

According to the State of Tennessee Water Quality Standards [Chapter 0400-40-03-.03(3) (b)], the pH for the protection of Fish and Aquatic Life shall lie within the range of 6.5 to 9.0 for large lakes and rivers and shall not fluctuate more than 1.0 unit in this range over a period of 24-hours. Considering that the receiving stream will provide some buffering capacity, effluent limitation for pH will be retained in a range 6.0 to 9.0. The sample type will be grab.

Industrial Stormwater Runoff, Outfalls SW1 and SW4

This facility is one which has storm water runoff associated with industrial activity, as defined in 40 CFR 122.26 (b)(14) and was previously covered under the Tennessee Stormwater Multi-Sector General Permit for Industrial Activities (TMSP). Stormwater runoff parameters to be monitored and reported were determined by comparing effluent limitations and monitoring requirements from the previous permit, the requirements from the TMSP, the data submitted on Discharge Monitoring Report (DMR) forms and annual stormwater monitoring reports, and the data contained in the application 2F submitted by the Wacker Polysilicon North America, LLC facility.

There are no effluent guidelines for storm water discharges from the Wacker Polysilicon North America, LLC facility. The application identified outfalls SW1, SW3 and SW4 as discharge points for industrial stormwater runoff discharge and requested that all industrial stormwater be covered under the individual permit.

The parameters of concern are the same as those under Sector C Table 3-C (included below for reference), applicable to SIC code 2819, Industrial Inorganic Chemicals, NEC. The division is not assigning limits for these parameters at this time since it is the intent of the division that the permittee continues to implement a Storm Water Pollution Prevention Plan (SWPPP) in order to minimize the discharge of these pollutants from storm water outfalls. It is the opinion of the division that the best method for dealing with potential pollution associated with storm water discharges from the Wacker Polysilicon North America, LLC facility is through

implementation of an aggressive SWPPP, coupled with discharge monitoring to verify SWPPP effectiveness.

In order to assist the permittee in the evaluation of the effectiveness of the SWPPP, benchmark values developed for the Tennessee Storm Water Multi-Sector General Permit for Industrial Activities are provided herein for comparison. These benchmark values (cut-off concentrations) were developed by the EPA and the State of Tennessee and are based on data submitted by similar industries for the development of the multi-sector general storm water permit. The cut-off concentrations are target values and should not be construed to represent permit limits.

Table C-3. Benchmarks for Industrial Inorganic Chemicals Monitoring Requirements

Pollutants of Concern	Benchmark [mg/L]
Ammonia	4
Total Recoverable Aluminum	0.75
Total Recoverable Copper	0.018
Total Recoverable Magnesium	0.064
Total Recoverable Iron	5.
Nitrate plus Nitrite Nitrogen	0.68

The draft permit contains the requirements for a Storm Water Pollution Prevention Plan (SWPPP) developed to regulate storm water runoff. This SWPPP is meant to ensure that runoff from the facility site is not a significant source of pollution to the receiving stream. Wacker should continue to implement and update the SWPPP as necessary to minimize pollutant discharges.

Hydrostatic Testing Discharges

In the application for renewal, Wacker identified the detention ponds for outfalls SW1 and SW4 as the collection points for all hydrostatic testing discharges prior to discharge to the receiving stream. Since the facility has virtually completed the construction phase of the project, only occasional relatively small hydrostatic testing discharges are expected. The testing will be performed on both used and new piping, vessels and equipment. Considering the contents of the equipment to be tested, each discharge should be tested for pH along with the normal visual inspection and estimate of total discharge. The monitoring should be performed at the point of discharge from the piping, vessel, etc., prior to being mixed with stormwater in the stormwater drainage system or the detention ponds.

VIII. BIOMONITORING REQUIREMENTS, ACUTE

Wacker performed two biomonitoring tests on the discharge. Both indicated that the discharge was non-toxic at dilutions above the maximum dilution required. However, two results are not sufficient for a determination of reasonable potential. Therefore, the draft permit requires annual biomonitoring in order to acquire sufficient data for making a reasonable potential determination.

The discharge of industrial wastewater from Outfall 001 may contain several different pollutants, the combined effect of which has a reasonable potential to be detrimental to fish and aquatic life. The Tennessee Water Quality Standards criteria stipulate that "*The waters shall not contain toxic substances, whether alone or in combination with other substances, which will produce toxic conditions...*" Toxicity effects of the discharge on the receiving stream are currently unknown. Biomonitoring will provide information relative to the toxicity of the discharge. Calculation of toxicity limits is as follows:

$$DF = \frac{Qs + Qw}{Qw} = \text{Dilution Factor}$$

where **Qw** is a wastewater flow (Qw = 1.59 MGD) and **Qs** is a receiving stream low flow (1Q10 estimated at 433 MGD). Therefore,

$$DF = \frac{433 + 1.59}{1.59} = 273$$

Since the calculated dilution factor is less than 500:1, and assuming immediate and complete mixing, protection of the stream from acute effects requires:

$$LC_{50} \text{ of the wastewater must be } \geq \frac{100\%}{273 \times 0.3} = \text{Lethal concentration}$$

$$LC_{50} \text{ of the wastewater must be } \geq \frac{100\%}{273 \times 0.3} = 1.22$$

Therefore, WET testing will be required on 1.22% effluent. The toxicity tests specified herein shall be conducted semi-annually (2/Year) for Outfall 001 and begin no later than 90 days from the effective date of this permit. If toxicity is demonstrated in any of the effluent samples specified above, this will constitute a violation of this permit.

Toxicity Limits for Proposed Higher Production Rates (Tiers)

Tier II (Poly-12):

WET testing

Calculation of toxicity limits is as follows:

$$DF = \frac{Qs + Qw}{Qw} = \text{Dilution Factor}$$

where **Qw** is a wastewater flow (Qw = 3.96 MGD) and **Qs** is a receiving stream low flow (1Q10 estimated at 433 MGD). Therefore,

$$DF = \frac{433 + 3.96}{3.96} = 110$$

Since the calculated dilution factor is less than 500:1, and assuming immediate and complete mixing, protection of the stream from acute effects requires:

$$LC_{50} \text{ of the wastewater must be } \geq \frac{100\%}{110 \times 0.3} = \text{Lethal concentration}$$

$$LC_{50} \text{ of the wastewater must be } \geq \frac{100\%}{110 \times 0.3} = 3\%$$

Tier III (Poly-13):

WET testing

Calculation of toxicity limits is as follows:

$$DF = \frac{Qs + Qw}{Qw} = \text{Dilution Factor}$$

where **Qw** is a wastewater flow (Qw = 6.34 MGD) and **Qs** is a receiving stream low flow (1Q10 estimated at 433 MGD). Therefore,

$$DF = \frac{433 + 6.34}{6.34} = 69.3$$

Since the calculated dilution factor is less than 500:1, and assuming immediate and complete mixing, protection of the stream from acute effects requires:

$$LC_{50} \text{ of the wastewater must be} \geq \frac{100\%}{69.3 \times 0.3} = \text{Lethal concentration}$$

$$LC_{50} \text{ of the wastewater must be} \geq \frac{100\%}{69.3 \times 0.3} = 4.8\%$$

IX. ANTIDEGRADATION

Tennessee's Antidegradation Statement is found in the Rules of the Tennessee Department of Environment and Conservation, Chapter 0400-40-03-.06. It is the purpose of Tennessee's standards to fully protect existing uses of all surface waters as established under the Act.

Stream determinations for this permit action are associated with the waterbody segments identified by the division as segment ID numbers TN06020002008_2000, Hiwassee River Embayment of Chickamauga Reservoir; and TN06020002009_1000, South Mouse Creek.

The division has conducted a water quality assessment of the receiving waters associated with the subject discharges and has found both receiving streams to be neither an exceptional nor outstanding national resource water.

Additionally, the Hiwassee Embayment partially supports designated uses due to high levels of mercury in fish tissue caused by atmospheric deposition and industrial point source(s). South Mouse Creek partially supports designated uses due to high levels of *E. coli* caused by sanitary sewer overflows (failure), discharges from MS4s, and grazing in riparian or shoreline areas. The discharges from this facility do not contain significant amounts of these effluent characteristics. The division, therefore, considers the potential for degradation to the receiving stream from these discharges to be negligible.

There are no approved TMDLs applicable to this facility's discharges.

X. ELECTRONIC REPORTING

Starting on December 21, 2016, all Individual NPDES Permit holders will be required to submit Discharge Monitoring Reports (DMRs) electronically through NetDMR. Prior to 21 December 2016, the permittee may elect to electronically submit DMRs instead of mailing paper DMRs.

EPA published the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, which will modernize Clean Water Act reporting for municipalities, industries and other facilities. The rule was published in the Federal Register on October 22, 2015 and became effective on December 22, 2015. The rule replaces most paper-based NPDES reporting requirements with electronic reporting.

More information is available at: http://www.tn.gov/environment/article/wr-netdmr-electronic-reporting:

- Getting Started on NetDMR,
- Electronic reporting schedule,
- Training Opportunities,
- NetDMR User Guide and other supporting information

XI. PERMIT DURATION

The proposed limitations meet the requirements of Section 301(b)(2)(A), (C), (D), (E), and (F) of the Clean Water Act as amended. It is the intent of the division to organize the future issuance and expiration of this particular permit such that other permits located in the same watershed and group within the State of Tennessee will be set for issuance and expiration at the same time. In order to meet the target reissuance date for the Hiwassee watershed and following the directives for the Watershed Management Program initiated in January, 1996, the permit will be issued to expire in 2022.

APPENDIX 1

FACILITY DISCHARGES AND RECEIVING WATERS

FACILITY DISCHARGES AND RECEIVING WATERS

OUTFALL 001	
LONGITUDE	LATITUDE
-84.7859	35.3144

RECEIVING STREAM DISCHARGE ROUTE
Hiwassee River Embayment of Chickamauga Reservoir at mile 15.9

FLOW (MGD)	DISCHARGE SOURCE
1.6000	Outfall 001 process wastewater, non-contact cooling water and utility water from Outfall 001
1.6000	TOTAL DISCHARGE

STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
	NA	670.0	1789.0
(MGD)	NA	433.0	1156.2

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	X
INDUSTRIAL	NAVIGATION			
X	X			

FACILITY DISCHARGES AND RECEIVING WATERS

OUTFALL 002	
LONGITUDE	LATITUDE
-84.7821	35.3115

RECEIVING STREAM DISCHARGE ROUTE
Hiwassee River Embayment of Chickamauga Reservoir at mile 16.5

FLOW (MGD)	DISCHARGE SOURCE
0.0440	Outfall 002, return water from river water intake
0.0440	TOTAL DISCHARGE

STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
	NA	670.0	1789.0
(MGD)	NA	433.0	1156.2

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	X
INDUSTRIAL	NAVIGATION			
X	X			

FACILITY DISCHARGES AND RECEIVING WATERS

OUTFALL SW1	
LONGITUDE	LATITUDE
-84.7982	35.3056

RECEIVING STREAM DISCHARGE ROUTE			
Hiwassee River Embayment of Chickamauga Reservoir (South Mouse Creek) at mile 1.7			
STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
	NA	NA	NA
(MGD)	NA	NA	NA

FLOW (MGD)	DISCHARGE SOURCE
0.0025	Outfall SW1, utility water
varies	industrial stormwater,hydrostatic testing water
varies	TOTAL DISCHARGE

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	
INDUSTRIAL	NAVIGATION			

FACILITY DISCHARGES AND RECEIVING WATERS

OUTFALL SW2	
LONGITUDE	LATITUDE
-84.8044	35.2935

RECEIVING STREAM DISCHARGE ROUTE			
South Mouse Creek at mile 2.5			
STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
	NA	NA	NA
(MGD)	NA	NA	NA

FLOW (MGD)	DISCHARGE SOURCE
varies	Outfall SW2, industrial & construction stormwater
varies	TOTAL DISCHARGE

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	
INDUSTRIAL	NAVIGATION			

FACILITY DISCHARGES AND RECEIVING WATERS

OUTFALL SW2A	
LONGITUDE	LATITUDE
-84.8024	35.2932

RECEIVING STREAM DISCHARGE ROUTE			
South Mouse Creek at mile 2.5			
STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
	NA	NA	NA
(MGD)	NA	NA	NA

FLOW gal/day	DISCHARGE SOURCE
500	Outfall SW2A,utility water
	discharged one day per month
NA	TOTAL DISCHARGE

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	
INDUSTRIAL	NAVIGATION			

FACILITY DISCHARGES AND RECEIVING WATERS

OUTFALL SW3	
LONGITUDE	LATITUDE
-84.7975	35.294

RECEIVING STREAM DISCHARGE ROUTE
South Mouse Creek at mile 2.55

FLOW gal/day	DISCHARGE SOURCE
varies	Outfall SW2, industrial & construction stormwater
varies	TOTAL DISCHARGE

STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
	NA	NA	NA
(MGD)	NA	NA	NA

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	
INDUSTRIAL	NAVIGATION			

FACILITY DISCHARGES AND RECEIVING WATERS

OUTFALL SW4	
LONGITUDE	LATITUDE
-84.7982	35.3056

RECEIVING STREAM DISCHARGE ROUTE
Hiwassee River Embayment of Chickamauga Reservoir (South Mouse Creek) at mile 1.7

FLOW (MGD)	DISCHARGE SOURCE
0.0025	Outfall SW4, utility water
varies	industrial stormwater,hydrostatic testing water
varies	TOTAL DISCHARGE

STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
	NA	NA	NA
(MGD)	NA	NA	NA

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	
INDUSTRIAL	NAVIGATION			

APPENDIX 2

HISTORICAL MONITORING AND INSPECTION

Outfall 001

Monitoring End Date	pH, SU		TSS, mg/l	Flow, MGD		Dissolved Solids, Total lbs/Day
	Daily Minimum	Daily Maximum	Daily Maximum	Monthly Average	Daily Maximum	Daily Maximum
Limit	6.0	9.0	Report	Report	Report	185468
03/31/2015	ND	ND	ND	ND	ND	ND
04/30/2015	ND	ND	ND	ND	ND	ND
05/31/2015	ND	ND	ND	ND	ND	ND
06/30/2015	7.0	7.6	20	0.048	0.216	495
07/31/2015	6.7	7.4	10	0.180	0.556	788
08/31/2015	6.4	7.4	7	0.316	0.938	16431
09/30/2015	6.6	7.8	6	0.253	0.514	935
10/31/2015	6.2	7.1	13	0.271	0.493	4646
11/30/2015	6.3	8.3	11	1.346	1.830	1714
12/31/2015	6.4	8.8	208	1.526	1.798	4053
01/31/2016	6.9	9.0	51	1.456	1.714	75853
02/29/2016	7.2	8.8	651	1.518	1.926	70824
03/31/2016	7.5	8.6	500	1.144	1.630	109920
04/30/2016	7.5	8.3	1204	1.100	1.268	102170
05/31/2016	7.8	8.2	860	0.924	1.128	76899
06/30/2016	7.6	8.3	874	1.019	1.177	93681
07/31/2016	7.6	8.6	716	1.164	1.444	111279
08/31/2016	7.4	8.2	703	1.165	1.704	135276
09/30/2016	7.7	8.5	604	1.300	1.770	110904

ND = Plant not yet discharging

Stormwater Monitoring

Stormwater Parameter	Ourfall SW1		Ourfall SW4	
	2015	2016	2015	2016
Flow, MGD D Max Rpt	12.91	6.29	ND	0.38
Nitrogen Ammonia, N, mg/l D Max Benchmark 4	1.08	1.00	ND	1.76
Nitrite + Nitrate, N, mg/l D Max Benchmark 0.46	0.11	0.91	ND	0.46
Magnesium, mg/l D Max Benchmark 0.064	10.1	20.70	ND	9.40
Copper, mg/l D Max Benchmark 0.018	0.01	0.01	ND	0.01
Iron, mg/l D Max Benchmark 5	26.2	25.30	ND	8.00
Aluminum, mg/l D Max Benchmark 0.75	31.6	58.60	ND	13.10

ND = insufficient flow for sampling

APPENDIX 2A

METALS AND TOXICS CONSIDERATIONS

Stream Assimilative Capacity and Effluent Contribution, Tier 1

Parameter	Calculated Effluent Concentration* Chronic ug/l	Calculated Effluent Concentration* Acute ug/l	Effluent Concentration ug/l	Percent of Capacity Chronic	Percent of Capacity Acute
Copper	5,383	7,840	10	0.19	0.13
Nickel	34,194	327,482	10	0.03	0.00
Chromium (VI)	1,358	2,588	10	0.73	0.38
Zinc	131,191	130,072	360	0.27	0.28

indicates Below Detection Level

* Values taken from calculations in the *Rationale* of the original draft permit page R-16 and titled *Water Quality based Calculations for Metals and other Toxics Substances, Outfall 001.* The most stringent concentration (lowest concentration) was used in the calculation.

Stream Assimilative Capacity and Effluent Contribution, Tier 3

Parameter	Calculated Effluent Concentration* Chronic ug/l	Calculated Effluent Concentration* Acute ug/l	Effluent Concentration ug/l	Percent of Capacity Chronic	Percent of Capacity Acute
Copper	1,366	1,989	10	0.73	0.50
Nickel	8,678	83,033	10	0.12	0.01
Chromium (VI)	348	660	10	2.79	1.49
Zinc	33,279	32,295	360	1.07	1.10

indicates Below Detection Level

* Values taken from calculations in the 2nd Addendum to the *Rationale,* original draft permit p. 6 of 7, and titled *Water Quality based Calculations for Metals and other Toxics Substances, Outfall 001 (calculations for Tier 3 - Poly 13).*
The most stringent calculated effluent concentration (lowest) was used in the calculation.

APPENDIX 3

PERMIT LIMITS AND MONITORING REQUIREMENTS

TIER 1
Description : External Outfall, Number : 001
Monitoring: Effluent Gross
Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
LC50 Static 48Hr Acute Ceriodaphnia	>=	1.22	% mortality	Grab	Annual	Minimum
LC50 Static 48Hr Acute Pimephales	>=	1.22	% mortality	Grab	Annual	Minimum
Total Dissolved Solids (TDS)	<=	185,468	lb/d	Composite	Daily	Daily Maximum
Total Suspended Solids (TSS)	Report	-	mg/L	Composite	Daily	Daily Maximum
pH	>=	6	SU	Grab	Daily	Daily Minimum
pH	<=	9	SU	Grab	Daily	Daily Maximum

TIER 2
Description: External Outfall, Number: 001
Monitoring: Effluent Gross
Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
LC50 Static 48Hr Acute Ceriodaphnia	>=	3	% mortality	Grab	Annual	Minimum
LC50 Static 48Hr Acute Pimephales	>=	3	% mortality	Grab	Annual	Minimum
Total Dissolved Solids (TDS)	<=	462,370	lb/d	Composite	Daily	Daily Maximum
Total Suspended Solids (TSS)	Report	-	mg/L	Composite	Daily	Daily Maximum
pH	>=	6	SU	Grab	Daily	Daily Minimum
pH	<=	9	SU	Grab	Daily	Daily Maximum

TIER 3
Description: External Outfall, Number: 001
Monitoring: Effluent Gross
Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
LC50 Static 48Hr Acute Ceriodaphnia	>=	4.8	% mortality	Grab	Annual	Minimum
LC50 Static 48Hr Acute Pimephales	>=	4.8	% mortality	Grab	Annual	Minimum
Total Dissolved Solids (TDS)	<=	740,258	lb/d	Composite	Daily	Daily Maximum
Total Suspended Solids (TSS)	Report	-	mg/L	Composite	Daily	Daily Maximum
pH	>=	6	SU	Grab	Daily	Daily Minimum
pH	<=	9	SU	Grab	Daily	Daily Maximum

Description: External Outfall
Numbers: SW1 and SW4
Monitoring: Effluent Gross
Season: All Year

Parameter	Qualifier	Value*	Unit	Sample Type	Frequency	Statistical Base
Aluminum, total (as Al)	<=	0.75	mg/L	Grab	Annual	Daily Maximum
Copper, total (as Cu)	<=	0.018	mg/L	Grab	Annual	Daily Maximum
Flow	Report	-	Mgal/d	Estimate	Annual	Daily Maximum
Iron, total (as Fe)	<=	5	mg/L	Grab	Annual	Daily Maximum
Magnesium, total (as Mg)	<=	0.064	mg/L	Grab	Annual	Daily Maximum
Nitrite plus nitrate total (as N)	<=	0.68	mg/L	Grab	Annual	Daily Maximum
Nitrogen, Ammonia total (as N)	<=	4	mg/L	Grab	Annual	Daily Maximum

Outfalls SW1 and SW4 are also subject to the following requirements applicable to hydrostatic test water discharges:

Internal Monitoring Point: IMP1 (to SW1) and IMP4 (to SW4) Monitoring: All Weather Season: All Year							
Code	**Parameter**	**Qualifier**	**Value**	**Unit**	**Sample Type**	**Frequency**	**Statistical Base**
00400	pH	>=	6	SU	Grab	Once Per Discharge	Daily Minimum
00400	pH	<=	9	SU	Grab	Once Per Discharge	Daily Maximum
50050	Flow	Report	-	Mgal/d	Estimate	Once Per Discharge	Total
84066	Oil and grease visual	Report	-	Y=1;N=0	Visual	Once Per Discharge	Value

a) Cleaning water; and pipe, equipment or vessel residuals may not be discharged as hydrostatic discharges; but must be treated if similar to facility wastewaters or disposed of according to all appropriate state and federal regulations;
b) The construction, transportation and storage of the vessels to be tested shall be done in such a way that prevents debris and materials from being deposited within the vessel where it may later be washed out by hydrostatic test water and released to surface or subsurface water;
c) The discharger shall use proper engineering practices and Best Management Practices (BMPs) to prevent contamination of hydrostatic test water by fuels, lubricants or waste materials. Used vessels or piping must be cleaned prior to testing.
d) Each hydrostatic discharge must be sampled at the point of discharge from the pipe, vessel or equipment being tested according to the Internal Monitoring Point table immediately above and reported on a Discharge Monitoring Report (DMR) form due on the date of the next process DMR form.